**assay** I in plasma vols. as low as 10 .mu.L for concns. within the normal therapeutic range. In the gas-chromatog.-**mass spectrometric** (GC-MS) **assay**, gas chromatog. sepns. were achieved on a glass column packed with OV-1 on Gas Chrom Q. The sensitivity of the assays was 500 ng by radioenzymic **assay**, in the pg range for the gas chromatog. with electron capture **assay**, and was <1 mg for the GC-MS **assay**. I was stable in the presence of other antibiotics. A good correlation was achieved between the MS **assay** and either the radioenzymic **assay** or electron capture **assay**.

=> d his

(FILE 'HOME' ENTERED AT 20:50:09 ON 25 AUG 2000)

FILE 'CA' ENTERED AT 20:50:15 ON 25 AUG 2000

| | | | |
|---|---|---|---|
| L1 | 1197 | S | RETENTATE |
| L2 | 21 | S | L1 AND CHROMATOGRAPHY |
| L3 | 347206 | S | SPECTROMET? |
| L4 | 169834 | S | L3 AND (MASS OR DESORPT? OR ION?) |
| L5 | 63 | S | L4 AND CAPTURE(10W)CHROMATOGR? |
| L6 | 0 | S | L5 AND SCREEN? |
| L7 | 2 | S | L5 AND INHIBIT? |
| L8 | 61 | S | L5 NOT L7 |
| L9 | 0 | S | L8 AND RECEPTOR(10W)LIGAND |
| L10 | 5 | S | L8 AND ASSAY |

```
=> s bacterial(10w)cells

        143382 BACTERIAL
       1056173 CELLS
L1        7835 BACTERIAL(10W)CELLS

=> s l1 and sample

MISSING TERM AFTER L1 AND
Operators must be followed by a search term, L-number, or query name.

=> s l1 and sample#

        870391 SAMPLE#
L2         466 L1 AND SAMPLE#

=> s l2 and mass spectromet?

        498296 MASS
        336490 SPECTROMET?
        133005 MASS SPECTROMET?
                 (MASS(W)SPECTROMET?)
L3          20 L2 AND MASS SPECTROMET?
```

bleached kraft effluent by GPC and ultrafiltration

AUTHOR(S): Lage, Liane E. C.; Sant'Anna, Geraldo L., Jr; Nobrega, Ronaldo

CORPORATE SOURCE: PEQ/COPPE/UFRJ, Rio de Janeiro, CEP 21945-970, Brazil

SOURCE: Bioresour. Technol. (1998), Volume Date 1999, 68(1), 63-70
CODEN: BIRTEB; ISSN: 0960-8524

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The mol. wt. distribution (MWD) of chlorinated compds. of bleached kraft pulp mill effluent was investigated by aq. gel permeation chromatog. (GPC) and ultrafiltration. The effluent was fractionated by ultrafiltration, using different cut-off membranes (MW 50000, 20000, 10000, and 8000). The **retentate** and permeate of each ultrafiltration was analyzed by GPC. The results showed that the mol. wt. distribution for all samples ranged from 200 to 550 Da. Two effects were discussed, i.e., associative interactions between the compds. to form high mol. assocd. complexes (aggregates); and non-size-exclusion effects, e.g. ion exclusion. Aggregates formation was confirmed by ultrafiltration expts., using a 50000 cut-off membrane.

REFERENCE COUNT: 20

REFERENCE(S):
(2) Bahary, W; Journal of Applied Polymer Science 1993, V48, P1531 CA
(4) Cammarota, M; Environ Technol 1992, V13, P65 CA
(5) Esposito, E; Biotechnology Letters 1991, V13(8), P571 CA
(6) Garcia, R; Journal of Chromatography A 1993, V655, P191 CA
(7) Garcia, R; Journal of Chromatography A 1993, V655, P3 CA

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 3 OF 21 CA 

ACCESSION NUMBER: 130:92457 CA

TITLE: **Retentate chromatography** and protein chip arrays with applications in biology and medicine

INVENTOR(S): Hutchens, T. William; Yip, Tai-tung

PATENT ASSIGNEE(S): Ciphergen Biosystems, Inc., USA

SOURCE: PCT Int. Appl., 157 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 9859362 | A1 | 19981230 | WO 1998-US12908 | 19980619 |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| AU 9884721 | A1 | 19990104 | AU 1998-84721 | 19980619 |
| EP 990258 | A1 | 20000405 | EP 1998-935479 | 19980619 |

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI

| | | | | |
|---|---|---|---|---|
| NO 996243 | A | 20000217 | NO 1999-6243 | 19991216 |
| PRIORITY APPLN. INFO.: | | | US 1997-54333 | 19970620 |
| | | | US 1997-67484 | 19971201 |
| | | | WO 1998-US12908 | 19980619 |

AB This invention provides methods of **retentate** chromatog. for resolving analytes in a sample. The methods involve adsorbing the analytes to a substrate under a plurality of different selectivity conditions, and detecting the analytes retained on the substrate by desorption spectrometry. The methods are useful in biol. and medicine, including clin. diagnostics and drug discovery.

REFERENCE COUNT: 5

REFERENCE(S):
(1) Afeyan, N; US 5453199 A 1995
(2) Sheiman, M; US 4752562 A 1988 CA
(3) Terrapin Diagnostics Ltd; WO 8903430 A 1989
(4) Vestal, M; US 5498545 A 1996
(5) Zeneca Ltd; GB 2281122 A 1995

L2 ANSWER 4 OF 21 CA COPYRIGHT 2000 ACS
ACCESSION NUMBER: 130:92456 CA
TITLE: **Retentate chromatography** and protein chip arrays with applications in biology and medicine
INVENTOR(S): Hutchens, T. William; Yip, Tai-tung
PATENT ASSIGNEE(S): Ciphergen Biosystems, Inc., USA
SOURCE: PCT Int. Appl., 157 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 9859361 | A1 | 19981230 | WO 1998-US12907 | 19980619 |
| W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| AU 9883753 | A1 | 19990104 | AU 1998-83753 | 19980619 |
| EP 990257 | A1 | 20000405 | EP 1998-934162 | 19980619 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI | | | | |
| PRIORITY APPLN. INFO.: | | | US 1997-54333 | 19970620 |
| | | | US 1997-67484 | 19971201 |
| | | | WO 1998-US12907 | 19980619 |

AB This invention provides methods of **retentate** chromatog. for resolving analytes in a sample. The methods involve adsorbing the analytes to a substrate under a plurality of different selectivity conditions, and detecting the analytes retained on the substrate by desorption spectrometry. The methods are useful in biol. and medicine, including clin. diagnostics and drug discovery.

REFERENCE COUNT: 4

REFERENCE(S):
(1) Baylor College Medicine; WO 9428418 A 1994
(2) Medical Res Council; WO 9406920 A 1994
(3) Univ Washington; WO 9709068 A 1997
(4) Vestal, M; US 5498545 A 1996

L2 ANSWER 5 OF 21 CA COPYRIGHT 2000 ACS
ACCESSION NUMBER: 130:78445 CA

for 20-60 min before starting the ultrafiltration. Plasmid DNA may be further purified after tangential flow ultrafiltration by filtering the **retentate** soln. through a 0.2-.mu.m filter and applying the filtered plasmid DNA soln. to a pos. charged ion change chromatog. resin, an further purifn. by an addnl. diafiltration step. A scaleable process for producing pharmaceutical grade plasmid DNA, useful for gene therapy, is provided, which is efficient and avoids the use of toxic org. chems. The pharmaceutical plasmid DNA compn. comprises <100 endotoxin units per mg nucleic acid, <2% RNA, <1% single-stranded DNA, <0.1% protein, <1% genomic DNA, and >90% closed circular plasmid DNA.

L2 ANSWER 8 OF 21 CA COPYRIGHT 2000 ACS
ACCESSION NUMBER: 128:21534 CA
TITLE: New method of preparation of bovine colostral immunoglobulins for parenteral application in calves
AUTHOR(S): Semotan, K.; Kalab, D.
CORPORATE SOURCE: Czech Rep.
SOURCE: Vet. Med. (Prague) (1997), 42(9), 249-252
CODEN: VTMDAR; ISSN: 0375-8427
PUBLISHER: Ustav Zemedelskych a Potravinarskych Informaci
DOCUMENT TYPE: Journal
LANGUAGE: Czech

AB A new simple method of prepn. of bovine colostral Igs was described using a single step pptn. of skimmed bovine colostrum with dimethyllaurylbenzylammonium bromide (DMLBAB). This quaternary ammonium compd. pptd. simultaneously nearly all colostral proteins lacking antibody activity. Bovine colostrum was collected mostly during of the first 24 h after calving, at the latest however until 48 h. Isolation of bovine colostral Igs proceeded as follows; one vol. of skimmed colostrum contg. 3-6% of Igs was slowly pptd. with the same vol. of 2% water soln. of DMLBAB at pH 7.9-8.1 along with continuous stirring. Turbid mixt. was then heated to 43-45.degree. and subsequently cooled to a room temp. standing overnight. Heavy ppt. sedimented down and supernatant fluid contg. purified Igs was decanted and clarified by filtration. Residual DMLBAB occurring in the filtrate was removed by passage through a strongly acidic cation exchange column prepd. in the Na+ form. Purified colostral Igs were thickened to the required protein concn. by ultrafiltration. Dense **retentate** was clear and became an amber color. Av. yield of purified colostral Igs reached 18.8 g/L of skimmed bovine colostrum. Electrophoretic purity of Igs fraction amounted to 90-95%. For parenteral application in calves the above soln. of Igs was subsequently adjusted to 9-11% content of protein, 0.9% of sodium chloride, pH 7.2, stabilized with 2% of aminoacetic acid and conserved with 0.015% of thiomersal. Finally, the prepn. was sterilized by filtration, kept its content of Igs minimally 2 yr at the temp. of storage between 2-8.degree. and remained biol. harmless. Using the method described it was not necessary to remove casein from skimmed bovine colostrum prior to the purifn. of Igs. Hence the method provided a significant short cut esp. in lab. as well as pilot scale prodn. of bovine colostral Igs bringing about a marked economic benefit.

L2 ANSWER 9 OF 21 CA COPYRIGHT 2000 ACS
ACCESSION NUMBER: 127:360133 CA
TITLE: Molecular weight distribution of chlorolignin in bleached kraft pulp mill effluent by gel permeation **chromatography** and ultrafiltration
AUTHOR(S): Lage, Liane E. C.; Sant'anna, Geraldo L., Jr.; Nobrega, Ronaldo
CORPORATE SOURCE: PEQ/COPPE/UFRJ, Rio de Janeiro, CEP 21945-970, Brazil
SOURCE: Braz. Symp. Chem. Lignins Other Wood Compon., Proc.,

5th (1997), Volume 6, 214-223. Editor(s): Ramos, Luiz
Pereira. Universidade Federal do Parana, Departamento
de Quimica: Curitiba, Brazil.
CODEN: 65HKA6
DOCUMENT TYPE: Conference
LANGUAGE: English
AB The mol. wt. distribution (MWD) of chlorinated compds. of bleached kraft pulp mill effluent was investigated by aq. gel permeation chromatog. (GPC)
and ultrafiltration. The effluent was fractionated by ultrafiltration, using different cut-off membranes, i.e., MW 50000, 20000, 10000, and 8000.
The **retentate** and permeate of each ultrafiltration was analyzed by GPC. The results showed that the wt.-av. mol. wt. for all samples ranged from 400 to 800 Da. Two effects were discussed: associative interactions between the compds. to form high-mol. assocd. complexes and non-size-exclusion effects, e.g. polyelectrolyte expansion and ion exclusion.

L2 ANSWER 10 OF 21 CA COPYRIGHT 2000 ACS
ACCESSION NUMBER: 127:238765 CA
TITLE: Quantitative molecular weight measurements by high pressure size exclusion **chromatography** of natural organic matter fractionated using tangential-flow ultrafiltration
AUTHOR(S): Everett, Chris; Chin, Yu-Ping
CORPORATE SOURCE: Dep. Geological Scis., Ohio State Univ., Columbus, OH,
43210, USA
SOURCE: Prepr. Pap. ACS Natl. Meet., Am. Chem. Soc., Div. Environ. Chem. (1997), 37(2), 65-66
CODEN: NMACDY; ISSN: 0270-3009
PUBLISHER: American Chemical Society, Division of Environmental Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The use of a tengential flow ultrafiltration device for isolating natural org. matter (NOM) from water was studied. Waters were collected from a variety of locations, including some that were well characterized by others. The objectives were to fractionate mol. stds. and the NOM source water by ultrafiltration; use high-pressure size-exclusion chromatog. to examine the mol wt. avs. of the filtrate and **retentate** for each NOM sample and compare them to those measured for the whole water; and conduct characterization studies such as spectroscopic analyses for the whole water samples and ultrafiltration retentates.

L2 ANSWER 11 OF 21 CA COPYRIGHT 2000 ACS
ACCESSION NUMBER: 124:155953 CA
TITLE: Preparation of hyperpolymers of hemoglobin with uniform molecular weight
INVENTOR(S): Barnikol, Wolfgang
PATENT ASSIGNEE(S): Germany
SOURCE: Eur. Pat. Appl., 6 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| EP 685492 | A2 | 19951206 | EP 1995-107280 | 19950513 |
| EP 685492 | A3 | 19960710 | | |

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE

| | | | | |
|---|---|---|---|---|
| DE 4418973 | A1 | 19951214 | DE 1994-4418973 | 19940531 |
| US 5994509 | A | 19991130 | US 1998-57100 | 19980408 |
| PRIORITY APPLN. INFO.: | | | DE 1994-4418973 | 19940531 |

AB Solns. of crosslinked Hb polymers are sepd. into fractions of uniform mol. wt. by ultrafiltration, fractional pptn., chromatog., and/or fractional dissoln. Use of high-mol.-wt. Hb polymers in blood substitute solns. minimizes the viscosity and colloid osmotic pressure. Thus, a 20% soln. of glutaraldehyde-crosslinked Hb with a mol. wt. distribution of 65,000 to 15 .times. 106 was passed through an ultrafilter with a mol. wt. cutoff of 106; the mol. wt. range of the polymer in the **retentate** was 500,000 to 15 .times. 106.

L2 ANSWER 12 OF 21 CA COPYRIGHT 2000 ACS

| | |
|---|---|
| ACCESSION NUMBER: | 120:53425 CA |
| TITLE: | Apparatus and method for removing compounds from a solution |
| INVENTOR(S): | Smith, Clark Robert |
| PATENT ASSIGNEE(S): | USA |
| SOURCE: | PCT Int. Appl., 20 pp.<br>CODEN: PIXXD2 |
| DOCUMENT TYPE: | Patent |
| LANGUAGE: | English |
| FAMILY ACC. NUM. COUNT: | 2 |

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| WO 9323151 | A1 | 19931125 | WO 1993-US4197 | 19930504 |
| W: AT, AU, BB, BG, BR, CA, CH, CZ, DE, DK, ES, FI, GB, HU, JP, KP, KR, KZ, LK, LU, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, UA, VN | | | | |
| RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG | | | | |
| AU 9342319 | A1 | 19931213 | AU 1993-42319 | 19930504 |
| EP 639105 | A1 | 19950222 | EP 1993-911036 | 19930504 |
| EP 639105 | B1 | 19980923 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE | | | | |
| HU 70805 | A2 | 19951128 | HU 1994-3192 | 19930504 |
| AT 171390 | E | 19981015 | AT 1993-911036 | 19930504 |
| ES 2123053 | T3 | 19990101 | ES 1993-911036 | 19930504 |
| ZA 9303213 | A | 19940614 | ZA 1993-3213 | 19930507 |
| PRIORITY APPLN. INFO.: | | | US 1992-880659 | 19920508 |
| | | | WO 1993-US4197 | 19930504 |

AB A method and app. are provided for the treatment of fluids, particularly wine, to remove unwanted substances (no data). The wine is first treated in a reverse osmosis treatment unit, generating a **retentate** and a raw permeate. The membrane for the reverse osmosis unit is selected to pass in the permeate the unwanted substances, which in the case of wine may be volatile acidity (EtOAc and AcOH). The raw permeate is then subjected to a treatment column. In the case of volatile acidity, this is an anion exchange column, which removes AcOH from the permeate by anion exchange and removes EtOAc by base hydrolysis. This produces a purified permeate, which is depleted in volatile acidity (which is passed through with the raw permeate), but contains other components desirable for the wine. The purified permeate is then recombined with the **retentate** from the reverse osmosis column, and the result is wine with the volatile acidity and little else removed. This wine may be recirculated through the system to remove yet more of the volatile acidity. The method may

also be applied to the removal of AcH, in which case a distn. column is used instead of the anion exchange column, and the distn. residue constitutes the purified permeate which is recombined with the **retentate** from the reverse osmosis column. An embodiment utilizing a high-energy distn. column may be used to sep. out alc. and water, and then add either the alc. or the water back to the reverse osmosis **retentate**, thus producing either a higher-alc. or a lower-alc. beverage, resp.

L2 ANSWER 13 OF 21 CA COPYRIGHT 2000 ACS
ACCESSION NUMBER: 119:22339 CA
TITLE: A new method for the purification of the B subunit (EtxB) of Escherichia coli heat-labile enterotoxin
AUTHOR(S): Amin, Tehmina; Marcello, Alessandro; Hirst, Timothy R.
CORPORATE SOURCE: Biol. Lab., Univ. Kent, Canterbury/Kent, CT2 7NJ, UK
SOURCE: Biochem. Soc. Trans. (1993), 21(2), 213S
CODEN: BCSTB5; ISSN: 0300-5127
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The authors describe the facilitated purifn. of heat-labile enterotoxin (EtxB) by its heterologous expression from a recombinant plasmid, pMMB68, in a marine vibrio (vibrio sp. 60). This results in a high level of expression and selective secretion of EtxB into the medium. The purifn. of EtxB from Vibrio sp. 60 was achieved as follows. The culture was centrifuged after 16 h induction with IPTG to obtain a supernatant contg. EtxB. Ultrafiltration (Filtron, Flowgen) was carried out on the essentially cell-free medium using membranes of mol. wt. exclusions of 1000K and 10K, and subjected to diafiltration with 20mM Tris-HCl pH 7.5. The **retentate** from the 10K membrane was collected and subjected to ammonium sulfate (30-70% satn.) pptn. Recovery of EtxB at this stage was ca. 60% with respect to that in the starting supernatant. The pptd. fraction was dissolved in 1M ammonium sulfate and applied to a hydrophobic interaction chromatog. column (Ph Superose HR 5/5, Pharmacia). A decreasing gradient of ammonium sulfate (1.0-0M in 20 mM Tris-HCl pH 7.5) was employed and EtxB eluted at 0.75M ammonium sulfate. It was then dialyzed against 20 mM Tris-HCl pH 7.5 contg. 20 mM NaCl overnight at 4.degree. prior to its application onto an anion exchange column (Neobar AQ15/4, Flowgen). EtxB was eluted from the anion exchange column using an increasing gradient of NaCl (20 mM-1 M in 20 mM Tris-HCl pH 7.5). EtxB eluted as a single peak and its homogeneity was demonstrated by the silver-staining of an SDS polyacrylamide gel. Both chromatog. steps resulted in 100% recovery of EtxB with respect to the amt. applied to each column.

L2 ANSWER 14 OF 21 CA COPYRIGHT 2000 ACS
ACCESSION NUMBER: 118:61759 CA
TITLE: Some characteristics of the lignins of a fast growing cottonwood hybrid compared with those of black cottonwood. In memoriam K. V. Sarkanen
AUTHOR(S): Qian, Ping; McCarthy, Joseph L.
CORPORATE SOURCE: Dep. Chem. Eng., Univ. Washington, Seattle, WA, 98195, USA
SOURCE: Holzforschung (1992), 46(6), 489-93
CODEN: HOLZAZ; ISSN: 0018-3830
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Because a recently developed cottonwood hydrid (P. trichocarpa .times. P. deltoides) was reported consistently to produce significantly more biomass per ha per yr than does black cottonwood (Populus trichocarpa), certain

characteristics of the 2 lignins were compared. Extractive-free sapwood chips and meals from black cottonwood and the hybrid were delignified using aq. NaOH solns. The dissolved lignins were ultrafiltered. The UV absorption spectra, the solute lignin concn., the av. mol. wt., and the polydispersity of the lignins present in the initial, the permeate, and the **retentate** solns. were detd. Results indicated that the dissolved lignins were of relatively low av. mol. wt., e.g. a few thousand. No significant differences were found between the lignins of the 2 cottonwoods.

L2 ANSWER 15 OF 21 CA COPYRIGHT 2000 ACS
ACCESSION NUMBER: 115:113012 CA
TITLE: Analysis of gelatin ultrafiltration by gel-permeation **chromatography**
AUTHOR(S): Sarrade, S.; Rios, G. M.; Autret, J. M.; Takerkart, G.
CORPORATE SOURCE: Cent. Genie Technol. Aliment., USTL, Montpellier, F 34095, Fr.
SOURCE: Lebensm.-Wiss. Technol. (1991), 24(1), 23-8
CODEN: LBWTAP; ISSN: 0023-6438
DOCUMENT TYPE: Journal
LANGUAGE: French
AB Various permeate and **retentate** samples taken at different times during the ultrafiltration of a gelatin soln. on a new Ru oxide-Ti oxide membrane coated onto an alumina support were analyzed by gel chromatog. This method, coupled with the more traditional approach (consisting of a continuous recording of permeate flow rate and total N rejection rate) allow a better insight into the basic mechanisms that control membrane fouling and the effects of it on performance. For the particular system investigated, it is clearly apparent that as long as the membrane effectively controls the sepn., cake filtration mechanisms prevail. But, when the effects of the alumina support become pre-eminent, deep filtration mechanisms substitute for them.

L2 ANSWER 16 OF 21 CA COPYRIGHT 2000 ACS
ACCESSION NUMBER: 111:113740 CA
TITLE: Recovery of proteins from whey or milk by a two-step process involving ultrafiltration and size exclusion **chromatography**
INVENTOR(S): Dubois, Ernest
PATENT ASSIGNEE(S): Applications Techniques Nouvelles, Fr.
SOURCE: Fr. Demande, 13 pp.
CODEN: FRXXBL
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| FR 2605322 | A1 | 19880422 | FR 1986-14511 | 19861020 |
| FR 2605322 | B1 | 19890428 | | |
| WO 8910064 | A1 | 19891102 | WO 1988-FR192 | 19880420 |
| W: DK, JP, US | | | | |
| RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE | | | | |
| EP 368862 | A1 | 19900523 | EP 1988-903858 | 19880420 |
| EP 368862 | B1 | 19921119 | | |
| R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE | | | | |
| AT 82471 | E | 19921215 | AT 1988-903858 | 19880420 |
| PRIORITY APPLN. INFO.: | | | FR 1986-14511 | 19861020 |
| | | | EP 1988-903858 | 19880420 |
| | | | WO 1988-FR192 | 19880420 |

AB Proteins with mol. wt. greater than .apprx.50,000 daltons, e.g. lactoferrin and Igs, are recovered from milk or whey by a two-step process

comprising ultrafiltration and size-exclusion chromatog. The membrane in the ultrafiltration app. has a mol. wt. cut-off of .apprx.50,000 daltons. The **retentate**, contg. the desired proteins, is passed over size exclusion columns to sep. the Ig, lactoferrin, and albumin fractions.

L2 ANSWER 17 OF 21 CA COPYRIGHT 2000 ACS
ACCESSION NUMBER: 108:36503 CA
TITLE: Manufacture of a composition enriched with .beta.-casein, apparatus for this process, and application of the products obtained for food, food or pharmaceutical industry additives, or preparation of bioactive peptides
INVENTOR(S): Terre, Eric; Maubois, Jean Louis; Brule, Gerard; Pierre, Alice
PATENT ASSIGNEE(S): Institut National de la Recherche Agronomique, Fr.
SOURCE: Fr. Demande, 24 pp.
CODEN: FRXXBL
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| FR 2592769 | A1 | 19870717 | FR 1986-325 | 19860110 |
| FR 2592769 | B1 | 19901012 | | |

AB Material rich in .beta.-casein and a co-product poor in .beta.-casein are obtained from mammalian milk or an aq. caseinate soln.; the milk or caseinate may be reconstituted from powders. The casein may be complexed with Ca or polymd. at 0-7.degree. before prepg. the above products by microfiltration on a mineral membrane in tangential flux at a velocity of 2.5-10 m/s, giving a .beta.-casein-enriched microfiltrate and a coproduct (**retentate**) low in .beta.-casein. A 2.5% Na caseinate soln. was treated with CaCl2 (2 g/L) and microfiltered on SFEC M 6 1000 at 5.degree. and 0.9-2.0 bar pressure to give a filtrate contg. 1.1 g .beta.-casein/L of 95% purity (of total protein).

L2 ANSWER 18 OF 21 CA COPYRIGHT 2000 ACS
ACCESSION NUMBER: 106:52352 CA
TITLE: A method for estimating the rejection coefficient-molecular weight relationship of ultrafiltration membrane for a chain polymer by using gel permeation **chromatography**
AUTHOR(S): Adachi, Shuji; Hashimoto, Kenji; Komoto, Mitsuaki; Tobita, Hidetaka
CORPORATE SOURCE: Dep. Chem. Eng., Kyoto Univ., Kyoto, 606, Japan
SOURCE: Biotechnol. Bioeng. (1986), 28(12), 1809-13
CODEN: BIBIAU; ISSN: 0006-3592
DOCUMENT TYPE: Journal
LANGUAGE: English

AB An improved method is presented for estg. rejection coeff.-mol. wt. relation of an ultrafiltration membrane for a polydisperse chain polymer. It is based on the basic idea using gel permeation chromatog. originally developed by A. R. Copper and D. S. Van Derveer (1979). The method, in which peak spreading of an elution curve of the polymer was taken into consideration, is available for evaluating the relation over a wide range of the mol. wt. through only one expt. in analyses of the **retentate** and filtrate.

L2 ANSWER 19 OF 21 CA COPYRIGHT 2000 ACS
ACCESSION NUMBER: 105:132293 CA
TITLE: Antioxidant activity of amino acid-xylose browning reaction products. 2. Isolation of antioxidants from

browning reaction products by TLC and dialysis
AUTHOR(S): You, Byeong Jin; Lee, Kang Ho; Lee, Jong Ho
CORPORATE SOURCE: Dep. Food Nutr., Kangnung Natl. Univ., Kangnung, 210, S. Korea
SOURCE: Han'guk Susan Hakhoechi (1986), 19(3), 212-18
CODEN: HSHKAW; ISSN: 0374-8111
DOCUMENT TYPE: Journal
LANGUAGE: Korean
AB Browning reaction products of xylose and tryptophan were sepd. on TLC into 4 bands with Rf values of 0.25, 0.55, 0.81, and 0.91, resp. The bands with Rf values of 0.25 and 0.55 had strong antioxidant activity. The band of Rf 0.55, which had the highest activity, was pos. to Proch.acte.azka reagent and had an absorbance max. at 275 nm. In dialysis of the xylose-tryptophan browning reaction products, the **retentate** fraction with antioxidant activity was sepd. into 2 bands with Rf values of 0.25 and 0.55 on TLC. The **retentate** of the browning products of xylose and histidine or arginine also had antioxidant activity.

L2 ANSWER 20 OF 21 CA COPYRIGHT 2000 ACS
ACCESSION NUMBER: 101:166522 CA
TITLE: Combination of conventional and high-performance liquid chromatographic techniques for the isolation of so-called "uremic toxins"
AUTHOR(S): Brunner, Helmut; Mann, Helmut
CORPORATE SOURCE: Abt. Inn. Med. II, Tech. Hochsch. Aachen, Aachen, 5100, Fed. Rep. Ger.
SOURCE: J. Chromatogr. (1984), 297, 405-16
CODEN: JOCRAM; ISSN: 0021-9673
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Using fluids from the artificial kidney as an example, a generally useful combination of sepn. techniques is described for the preparative isolation of biol. active subfractions from extremely heterogeneous and dild. biol. fluids. Hemofiltrate (20 L) and dialyzate (100 L), resp., are desalted and concd. in 1 step by reverse osmosis using membranes with a nominal cut-off of 500 Daltons. The **retentate** with high concns. of uremic toxins is fractionated by preparative ion-exchange chromatog. (double column technique with detection at 206 nm) and size exclusion chromatog. yielding large amts. of ninhydrin-pos. subfractions which inhibit DNA synthesis of rat bone marrow and HeLa cells in vitro, resp. These fractions were analyzed by reversed-phase and size exclusion high-performance liq. chromatog. Many of the isolated fractions contained peptides.

L2 ANSWER 21 OF 21 CA COPYRIGHT 2000 ACS
ACCESSION NUMBER: 93:3211 CA
TITLE: A new approach to the analysis of ganglioside molecular species
AUTHOR(S): Nagai, Yoshitaka; Iwamori, Masao
CORPORATE SOURCE: Dep. Biochem., Tokyo Metrop. Inst. Gerontol., Tokyo, 173, Japan
SOURCE: Adv. Exp. Med. Biol. (1980), 125(Struct. Funct. Gangliosides), 13-21
CODEN: AEMBAP; ISSN: 0065-2598
DOCUMENT TYPE: Journal
LANGUAGE: English
AB An improved process for the purifn. and characterization of gangliosides was developed. Tissue Me2CO powders are extd. with CHCl3-MeOH. The exts. are applied to a DEAE-Sephadex column and eluted with 10 vols. MeOH contg.

0.2N NaOAc. The acidic lipids obtained are hydrolyzed with 0.5N NaOH in MeOH, and the soln. is neutralized and dried. The residue is dissolved in H2O and dialyzed. The **retentate** is dried and the residue dissolved in CHCl3-MeOH for chromatog. on silica gel. The column is eluted with 95:5 and 85:15 CHCl3-MeOH to elute sulfatides and then with 1:1 to elute gangliosides. They are applied to a DEAE-Sepharose column, eluted with a gradient of NH4OAc in MeOH, and sepd. to individual gangliosides on a column of Iatrobeads.

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=> s spectromet?

L3       347206 SPECTROMET?

=> s l3 and (mass or desorpt? or ion?)

         518703 MASS
          70261 DESORPT?
        1319572 ION?
L4       169834 L3 AND (MASS OR DESORPT? OR ION?)

=> s l4 and capture(10w)chromatogr?

          55209 CAPTURE
         250622 CHROMATOGR?
            664 CAPTURE(10W)CHROMATOGR?
L5           63 L4 AND CAPTURE(10W)CHROMATOGR?

=> s l5 and screen?

         151737 SCREEN?
L6            0 L5 AND SCREEN?

=> s l5 and inhibit?

        1216117 INHIBIT?
L7            2 L5 AND INHIBIT?

=> d l7 1-2 ibib ab


L7   ANSWER 1 OF 2  CA  COPYRIGHT 2000 ACS
ACCESSION NUMBER:         98:50445  CA
TITLE:                    Identification of abscisic acid in Tulipa gesneriana
                          L. by gas-liquid chromatography with electron
                          capture and combined gas-liquid
                          chromatography and mass
                          spectrometry
AUTHOR(S):                Terry, Paul H.; Aung, Louis H.; De Hertogh, August A.
CORPORATE SOURCE:         Beltsville Agric. Res. Cent., U. S. Dep. Agric. Sci.
                          Educ. Adm., Beltsville, MD, 20705, USA
SOURCE:                   Plant Physiol. (1982), 70(5), 1574-6
                          CODEN: PLPHAY; ISSN: 0032-0889
DOCUMENT TYPE:            Journal
LANGUAGE:                 English
AB   A major growth inhibitory substance of tulip bulbs (T.
     gesneriana) was shown to be ABA. The ABA Me ester of the free ether-sol.
     acid fractions of tulip organs had the identical retention time on gas
     chromatog. with electron capture detector as authentic ABA Me ester. In
     addn., the mass spectra were the same. On a unit dry matter
     basis, the basalplate and floral shoot contained 3.6 and 2.6 times more
     ABA than the fleshy scales, resp.

L7   ANSWER 2 OF 2  CA  COPYRIGHT 2000 ACS
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ACCESSION NUMBER: 86:117007 CA
TITLE: Improved techniques for sequencing polypeptides using electron **capture** detection and gas **chromatography-mass spectrometry**
AUTHOR(S): Nau, H.
CORPORATE SOURCE: Ges. Molekularbiol. Forsch., Stoeckheim/Braunschweig, Ger.
SOURCE: Adv. Mass Spectrom. Biochem. Med. (1977), 2, 543-57
CODEN: AMSMDB
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A method is described for detg. optimal conditions for hydrolysis of polypeptides prior to further degrdn. and gas chromatog.-**mass** spectroscopic (GC-MS) anal. Thus, samples of glucagon and melittin were subjected to acid hydrolysis under various conditions, followed by derivatization to the N-heptafluorobutyryl-peptide Me esters and anal. by GC with electron capture detection. From the patterns of the gas chromatograms obtained, the optimal hydrolysis conditions can be selected readily. Addnl. information is provided for a sample of potato carboxypeptidase **inhibitor**, hydrolyzed with acid, derivatized, and analyzed by a computerized GC-MS system. The course of enzymic degrdn. also can be monitored by the given procedure.

=> d his

(FILE 'HOME' ENTERED AT 20:50:09 ON 25 AUG 2000)

FILE 'CA' ENTERED AT 20:50:15 ON 25 AUG 2000
L1 1197 S RETENTATE
L2 21 S L1 AND CHROMATOGRAPHY
L3 347206 S SPECTROMET?
L4 169834 S L3 AND (MASS OR DESORPT? OR ION?)
L5 63 S L4 AND CAPTURE(10W)CHROMATOGR?
L6 0 S L5 AND SCREEN?
L7 2 S L5 AND INHIBIT?

=> s l5 not l7

L8 61 L5 NOT L7

=> s l8 and receptor(10w)ligand

395380 RECEPTOR
183709 LIGAND
14030 RECEPTOR(10W)LIGAND
L9 0 L8 AND RECEPTOR(10W)LIGAND

=> s l8 and assay

210646 ASSAY
L10 5 L8 AND ASSAY

=> d l10 1-5 ibib ca

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IBIB -------- BIB, indented with text labels
IMAX -------- MAX, indented with text labels
ISTD -------- STD, indented with text labels

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OIBIB ------- OBIB, indented with text labels

SBIB -------- BIB, no citations
SIBIB ------- IBIB, no citations

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HITSTR ------ HIT RN, its text modification, its CA index name, and
its structure diagram
FHITSTR ----- First HIT RN, its text modification, its CA index name, and
its structure diagram
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OCC --------- Number of occurrence of hit term and field in which it occurs

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L10 ANSWER 1 OF 5 CA COPYRIGHT 2000 ACS
ACCESSION NUMBER: 119:179512 CA
TITLE: Quantification of the carcinogens
2-amino-3,8-dimethyl-
and 2-amino-3,4,8-trimethylimidazo[4,5-f]quinoxaline
and 2-amino-1-methyl-6-phenylimidazo[4,5-b]pyridine
in
food using a combined **assay** based on gas
chromatography-negative **ion mass**
**spectrometry**
AUTHOR(S): Murray, Stephen; Lynch, Anthony M.; Knize, Mark G.;
Gooderham, Nigel J.
CORPORATE SOURCE: Dep. Clin. Pharmacol., R. Postgrad. Med. Sch.,
London,

W12 0NN, UK
SOURCE: J. Chromatogr., Biomed. Appl. (1993), 616(2), 211-19
CODEN: JCBADL; ISSN: 0378-4347
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A gas chromatog.-**mass spectrometric assay** was developed for the measurement of 2-amino-3,8-dimethylimidazo[4,5-f]quinoxaline (MeIQx), 2-amino-3,4,8-trimethylimidazo[4,5-f]quinoxaline (DiMeIQx), and 2-amino-1-methyl-6-phenylimidazo[4,5-b]pyridine (PhIP) in food. Stable isotope-labeled analogs of MeIQx and PhIP are used as internal stds. and the synthesis of deuterated PhIP is described. The **mass spectrometer** is operated in the electron-**capture** neg. **ion** chem. **ionization** mode and the amines are **chromatographed** as their di-3,5-bistrifluoromethylbenzyl derivs. All 3 compds. can be measured in a single chromatog. run and detection limits of 0.05, 0.1, and 0.2 mg/g for MeIQx, DiMeIQx, and pHIP, resp., in food are obtained. Various home-cooked and com. prepd. foodstuffs were analyzed with this **assay** and several contained measurable amts. of one or more of the 3 amines.

L10 ANSWER 2 OF 5 CA COPYRIGHT 2000 ACS
ACCESSION NUMBER: 117:65778 CA
TITLE: Quantitation of 20-hydroxy-5,8,11,14-eicosatetraenoic acid (20-HETE) produced by human polymorphonuclear leukocytes using electron **capture ionization** gas **chromatography/ mass spectrometry**
AUTHOR(S): Hill, Elizabeth; Murphy, Robert C.
CORPORATE SOURCE: Natl. Jew. Cent. Immunol. Respir. Med., Denver, CO, 80206, USA
SOURCE: Biol. Mass Spectrom. (1992), 21(5), 249-53
CODEN: BIMSEH; ISSN: 1052-9306
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Arachidonic acid can be enzymically oxidized at the terminal Me group by the cytochrome P 450 system found in several tissues and cells, including human polymorphonuclear leukocyte. The .omega.-hydroxy metabolite, 20-HETE, has interesting and diverse biol. activities. Accurate measurement of quantities of this metabolite using phys. chem. methods has not been previously described, but is necessary to assess biosynthesis of this eicosanoid from endogenous arachidonic acid. A procedure is described to quantitate 20-HETE produced by human polymorphonuclear leukocytes following physiol. stimulation using (18O2)carboxy-20-HETE as internal std. Since the human neutrophil produces relatively small amts. of this eicosanoid, such a study required substantial sensitivity in the quant. **assay**. Following stimulation of the neutrophil, cell exts. and supernatants were purified by reversed-phase HPLC, catalytically reduced then derivatized to the pentafluorobenzyl ester, trimethylsilyl ethers before electron capture **ionization** gas chromatog./ **mass spectrometry**. Using selected **ion** monitoring, the amt. of 20-HETE present in a biol. ext. could be detected when as little as 60 pg per sample were available. Following stimulation of the human neutrophil with formyl-methionyl-leucyl-phenylalanine (0.1 .mu.M), platelet activating factor (0.1 .mu.M) as well as with the calcium **ionophore** A23187 (2 .mu.M), 20-HETE was generated from endogenous arachidonate in concns. of 1.2, 1.3, and 5.7 pg/106 cells, resp.

L10 ANSWER 3 OF 5 CA COPYRIGHT 2000 ACS
ACCESSION NUMBER: 95:57383 CA
TITLE: Microscale preparation of pentafluorobenzyl esters. Electron-**capture** gas **chromatographic**

detection of indole-3-acetic acid from plants
AUTHOR(S): Epstein, Ephraim; Cohen, Jerry D.
CORPORATE SOURCE: Volcani Cent., Agric. Res. Organ., Bet Dagan, Israel
SOURCE: J. Chromatogr. (1981), 209(3), 413-20
CODEN: JOCRAM; ISSN: 0021-9673
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A microscale method is described for the prepn. of the pentafluorobenzyl ester of IAA, using .alpha.-bromopentafluorotoluene as the esterifying agent and the volatile base, N-ethyl-piperidine. The resultant reaction mixt. may be used directly for gas chromatog. employing an electron-capture detector with a column of 1% OV-17 on Gas-Chrom Q at 250.degree. with N as the carrier gas. Greater sensitivity and selectivity can be attained by neg. **ion** chem.-**ionization** gas chromatog.-**mass spectrometry**. The method is applicable to **assay** of IAA in resinous plant material such as olive leaves.

L10 ANSWER 4 OF 5 CA COPYRIGHT 2000 ACS
ACCESSION NUMBER: 91:49145 CA
TITLE: Sensitive electron-**capture** gas-liquid **chromatographic assay** for the de-ethylated metabolite of metoclopramide
AUTHOR(S): Tam, Y. K.; Axelson, J. E.
CORPORATE SOURCE: Fac. Pharm. Sci., Univ. British Columbia, Vancouver, BC, V6T 1W5, Can.
SOURCE: J. Chromatogr. (1979), 170(1), 157-63
CODEN: JOCRAM; ISSN: 0021-9673
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A method is described for detg. 4-amino-5-chloro-2-methoxy-N-(2-ethylaminoethyl)benzamide (I) [27260-19-1], a metabolite of metoclapramide, in the urine from rats. The sample was extd (at pH .apprx.13) with chloroform and, after treatment with heptafluorobutyric anhydride, derivs. of the extd. compds. were analyzed by gas-liq. chromatog., with electron-capture detection and diazepam as internal std. A gas chromatograph equipped with a 63Ni electron capture detector and a glass column contg. 3% SP-2250 DB coated on Supelcoport and Ar-methane (19:1, vol./vol. as carrier gas was used. I could be detd. in the range 0.4-1.85 .mu.g/mL in the sample. The av. recovery of I from urine exts. was 85.78%. The behavior of I during chem.-**ionization** and electron-impact **mass spectrometry** is described.

L10 ANSWER 5 OF 5 CA COPYRIGHT 2000 ACS
ACCESSION NUMBER: 90:145443 CA
TITLE: Assays for chloramphenicol compared: radioenzymic, gas chromatographic with electron **capture**, and gas **chromatographic-mass spectrometric**
AUTHOR(S): Pickering, L. K.; Hoecker, J. L.; Kramer, W. G.; Liehr, J. G.; Caprioli, R. M.
CORPORATE SOURCE: Med. Sch., Univ. Texas, Houston, Tex., USA
SOURCE: Clin. Chem. (Winston-Salem, N. C.) (1979), 25(2), 300-5
CODEN: CLCHAU; ISSN: 0009-9147
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The 3 techniques for measuring chloramphenicol (I) [56-75-7] in blood serum and urine were compared. Radioenzymic **assay** at 37.degree. with the use of I-acetyltransferase (EC 2.3.1.28) gave a std. curve which was linear for I concns. from 1-60 mg/L for serum and 1-50 mg/L for urine.

Gas chromatog. with electron capture using 3% OV-17 on Gas Chrom Q and 5% methane in argon as carrier gas had great sensitivity and could be used to